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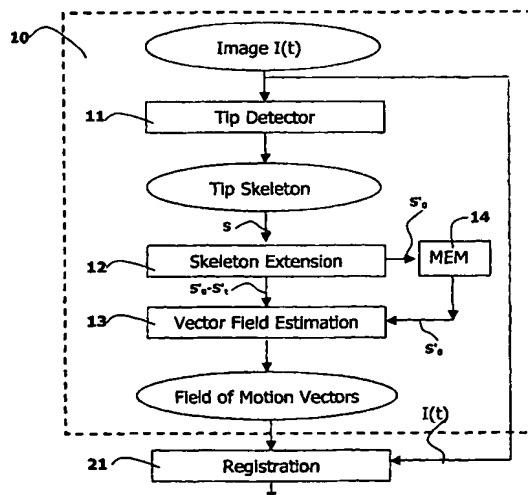
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(54) Title: MEDICAL VIEWING SYSTEM AND METHOD FOR DETECTING BOUNDARY STRUCTURES



(57) **Abstract:** A medical viewing system for displaying a sequence of medical images that represents moving and/or positioning a guide-wire in a blood vessel, which guide-wire has a guide-wire tip that is contrasted with respect to the guide wire, this system comprising acquisition means that acquires an original sequence of noisy images called live sequence and processing means for processing said live sequence of images in real time, the processing means comprising: first means (10) for automatically detecting the guide-wire tip, yielding skeleton information of the guide-wire tip and a field of motion vectors based on said skeleton information; second means (20) for automatically registering the guide-wire tip with respect to a reference based on the field of motion vectors and for enhancing the guide-wire and the vessel walls while blurring the background in the registered images; and comprising: Display means for displaying a live sequence of processed images.